IN THE CLAIMS:

1.   (Original) An apparatus for analyzing brain functions, comprising: biosignal

detection means for detecting a biosignal of an examinee in parallel with examination of the

brain of the examinee conducted by an MRI System; and a functioning part location calculating

means for finding out a part of the brain functioning in a state where a predetermined event is

occurring in the biosignal by calculation based on a correlation between time-series data of the

biosignal and a change in a strength of a MRI signal outputted from the MRI system.

2.   (Original) The apparatus in accordance with claim 1, wherein the predetermined

event is an event based on which a waking level of the examinee is identified.

3.   (Original) The apparatus in accordance with claim 1, wherein the biosignal

detection means is configured to detect an electroencephalogram of the examinee as the

biosignal.

4.   (Amended) The apparatus in accordance with ~~claims~~ <u>claim</u> 1, wherein the

detection of the biosignal of the examinee by the biosignal detection means and the examination

of the brain of the examinee by the MRI system are performed alternately.

5.   (Original) A method of analyzing brain functions, comprising the steps of:

detecting a biosignal of an examinee in parallel with examination of the brain of the examinee

conducted by an MRI system; and finding out a part of the brain functioning in a state where a

predetermined event is occurring in the biosignal by calculation based on a correlation between

time-series data of the biosignal and a change in a strength of a MRI signal outputted from the

MRI system.

1   6.   (New) A system for analyzing brain functions, comprising:

2   a detection unit for detecting a biological function and outputting a biosignal of a

3   patient;

4   a brain examination unit for detecting a function of a brain of the patent and

5   outputting a brain function signal; and

6   a location calculating unit for calculating a correlation between the biosignal and

7   the brain function signal to determine a specific portion of the brain that is active.

1   7.   (New) The system of claim 6 wherein the location calculating unit calculates a

2   location based on a correlation between time-series data of the biosignal and a change in value of

3   the brain function signal.

1   8.   (New) The system of claim 6 further including an event identification support

2   unit for identifying an event corresponding with the biosignal.

1   9.   (New) The system of claim 8 further including a heart monitor unit to detect

2   heartbeat noise wherein the event identification support unit can eliminate heartbeat noise.

1   10.   (New) The system of claim 9 wherein the brain examination unit provides an

2   MRI signal and the event identification support unit receives an electroencephalograph signal

3   and the event identification support unit includes a noise elimination section and a frequency

4   analyzing section for outputting a display of data on the frequency of occurrences of an event.